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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,214	01/21/2004	Kia Silverbrook	WALISUS	1372
24011 7590 03/05/2009 SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			EXAMINER GOLDBERG, BRIAN J	
			ART UNIT 2861	PAPER NUMBER
			MAIL DATE 03/05/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/760,214

Applicant(s)

SILVERBROOK ET AL.

Examiner

BRIAN J. GOLDBERG

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 9, 21-30 and 45 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4, 9, 21-30 and 45 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Priority

1. The petition for the foreign priority claim was dismissed (see Petition Decision mailed 2/20/09). Thus claim 1 has been given priority to prior-filed application 10/160,273 filed on 6/4/02. However, it is reiterated that regarding claims 2-4, 9, 21-30, and 45, there is no support found for these claims in the parent application, and thus these claims are not given priority to the parent in the instant continuation-in-part application, as stated previously.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. (US 5051761) in view of Silverbrook (US 6322195) and further in view of Lin et al. (US 6022104).

3. Regarding claim 1, Fisher et al. disclose "a printhead assembly for a printer which prints onto a moving web (12 of Fig 1) that follows a path, comprising: a full width printhead (34 of Fig 1 and col 4 In 15-18) located across the path...the color printhead being supplied with a number of different colored inks (31M/Y/C/B of Fig 1)." Thus Fisher et al. meet the claimed invention except "the printhead comprising a plurality of inkjet nozzles having thermal bend actuators configured to cause ink ejection from the

nozzles; the printhead comprising a color printhead which is at least as wide as the web.”

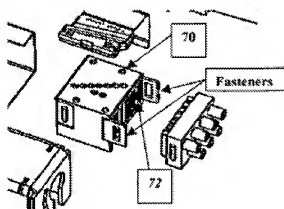
4. Silverbrook teaches “the printhead comprising a plurality of inkjet nozzles (4 of Fig 1) having thermal bend actuators (7 of Fig 1), each thermal bend actuator having an arm (10 of Fig 1) comprising a heater portion (11 of Fig 1), each heater portion being configured to thermally expand upon heating thereby bending the associated arm so as to cause ink ejection from the nozzles (col 4 ln 49-57, see Figs 1-10).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include inkjet nozzles with thermal bend actuators. One would have been motivated to so modify Fisher et al. for the benefit of permitting high speed printing and increasing the ejection efficiency.

5. Lin et al. teach “the printhead comprising a color printhead (170 of Fig 2) which is at least as wide as the web (P of Fig 2).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to make the color printhead at least as wide as the web. One would have been motivated to so modify Fisher et al. in view of Silverbrook for the benefit of enabling printing on the entire web if small margins or margin-less printing is desired.

1. Claims 2-4, 9, and 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. in view of Silverbrook and Lin et al. and further in view of Silverbrook (US 20020180834). Fisher et al. in view of Silverbrook and Lin et al. disclose the claimed invention as set forth above regarding claim 1. Thus, Fisher et al.

in view of Silverbrook and Lin et al. meet the claimed invention except the limitations set forth in claims 2-4, 9, and 21-30.

2. Regarding claims 2-4, and 9, Silverbrook teaches “a rail which is located across the path and along which the printhead slides into and out of a printing position (Par [0057], [0013], [0014])...the printhead is secured to the rail by fasteners which allow the printhead to be removed when the fasteners are disengaged (Par [0057] and see Fig 8 below).”



“...the inks are contained in individual reservoirs and a supply tube connects each reservoir to the printhead (Par [0057] and [0059])...a coupling in each ink supply tube which can be disconnected so that the printhead can be withdrawn (Par [0059]).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include a rail with the printhead secured to it by fasteners and having a supply tube capable of being disconnected supply ink to the printhead from reservoirs. One would have been motivated to so modify Fisher et al. in view of Silverbrook and Lin et al. for the benefit of allowing the printhead to be repaired or replaced, and thus extending the life of the printer.

3. Regarding claims 21-23, the printing rate does not substantially further limit the structure of the printhead assembly and the rates could be reached through routine experimentation for optimization since such experimentation would result in acquiring the best possible quality. Also, even if one argues that it does further limit the structure, the various printing rates are disclosed by Silverbrook (see chart at the bottom of page 9 where the printing rate exceeds 7750 square feet per hour).
4. Regarding claims 24-30, Silverbrook discloses the various number of nozzles claimed (see Par [0093] where 552960 nozzles are disclosed) and the various volumes for the ink drops (see Par [0095] where 1 picoliter is disclosed). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Fisher et al. in view of Silverbrook and Lin et al. to have the various numbers of nozzles and the various volumes for the ink drops in order to achieve the predictable result of high speed and accurate printing.
5. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. in view of Silverbrook and Lin et al. and further in view of Silverbrook and Martin (20020171692). Fisher et al. in view of Silverbrook and Lin et al. disclose the claimed invention as set forth above regarding claim 1. Thus Fisher et al. in view of Silverbrook and Lin et al. meet the claimed invention except for the limitations set forth in claim 45.
6. Silverbrook teaches "the printhead being supplied by separate ink reservoirs, the reservoirs connected to the printhead by an ink supply harness, there being a disconnect coupling between the reservoirs and the printhead (Par [0057] and [0059])." It would have been obvious to one of ordinary skill in the art at the time of the applicant's

invention to supply the printhead with ink from detachable ink reservoirs. One would have been motivated to so modify Fisher et al. in view of Silverbrook and Lin et al. for the benefit of allowing the printhead or ink reservoirs to be refilled or replaced, thus extending the life of the printer.

6. Martin teaches "a housing in which is located a media path which extends from a blank media intake to a wallpaper exit slot (see Fig 2 with media 27, enters from supply 24, exits to take-up 26); a multi-color roll width removable printhead located in the housing and across the media path (20 of Fig 2, see Par [0009]); one or more input devices for capturing operator instructions (36, 37 of Fig 2); a processor which accepts operator inputs which are used to configure the printer for producing a particular roll (38 of Fig 2, Par [0009] and [0010])." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the housing, input devices, and processor disclosed by Martin with the printhead assembly disclosed by Fisher et al. in view of Silverbrook, Lin et al. and Silverbrook. One would have been motivated to so modify Fisher et al. in view of Silverbrook, Lin et al. and Silverbrook for the benefit of allowing the user to personalize the media by arranging the printed images in a pattern, as stated by Martin.

Response to Arguments

7. Applicant's arguments filed 9/21/08 have been fully considered but they are not persuasive in light of the petition being dismissed and therefore the previous rejections stand.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN J. GOLDBERG whose telephone number is (571)272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MATTHEW LUU/
Supervisory Patent Examiner, Art Unit 2861

/Brian J. Goldberg/
Examiner
Art Unit 2861